

REMARKS

Herein, the "Action" or "Office Action" refers to the Office Action dated 9/08/2004.

Applicant respectfully requests reconsideration and allowance of all of the claims of the application. Claims 1-52 are presently pending. Claims amended herein are 9, 19, 26, 42 and 47. Claims withdrawn or cancelled herein are 10, 20, 27, 44, and 51. New claims added herein are none.

Formal Claim Rejections

Claim Rejections under §112

The Office rejects claims 6 and 16 under § 112, 2nd ¶, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Office indicates that the term "good margins" is not defined and thereby fails to specify the limitation of the claim. Applicant traverses the rejection.

While the term "good margin" is not expressly defined, concept of margins is discussed several times in the Application, including (for example) at p. 8, lines 9-14 and p. 30, lines 11-17. So, to clarify the definition of the term, Applicant defines the term "good margins" to be margins that range between a pre-defined "ideal" margin and a pre-defined "minimal" margin. If there are so such pre-defined "ideal" and "minimal" margins, then "good margins" are approximately 5% of the height or width of the virtual page.

Accordingly, Applicant asks the Office to withdraw this rejection.

Substantive Claim Rejections

Claim Rejections under §102 and §103

The Office rejects all of the pending claims under §102 and/or §103. For the reasons set forth below, the Office has not shown that cited references anticipate (under §102) the rejected claims. For the reasons set forth below, the Office has not made out a *prima facie* case of obviousness (under §103). Accordingly, Applicant respectfully requests that the rejections be withdrawn and the case be passed along to issuance.

The Office's rejections are based upon the following reference:

- **Kelly:** *Kelly et al.*, US Patent No. 6,694,485 (issued 2/17/2004);
- **Warnock:** *Warnock et al.*, US Patent No. 5,634,064 (issued 5/27/1997);
- **Baum:** *Stephen Baum*, US Patent No. 6,188,779 (issued 2/13/2001);
- **Klinefelter:** *Gary Klinefelter*, US Patent No. 4,965,670 (issued 10/23/1990);
- **Atkinson:** *William Atkinson*, US Patent No. 4,622,545 (issued 11/11/1986);
- **Bereiter:** *Thomas Bereiter*, US Patent No. 5,909,217 (issued 6/1/1999).

Overview of the Application

The Application describes techniques directed towards enhancing the reading experience of electronically stored documents on electronic display

1 devices. The reading experience corresponds to the natural reading experience that
2 a person has with a paper document.

3 Unlike the conventional virtual paging paradigms, this technology
4 intelligently examines the content of a fixed electronic document at (or near) a
5 boundary of virtual pages. It determines whether that content includes lines of
6 text. If it does, then it moves the virtual page boundary to white space between
7 lines rather than splitting a line of text or displaying overlap. This action
8 intelligently avoids splitting a line of text.

9 Alternatively, if it cannot determine whether that content includes lines of
10 text, then it produces an overlap, but it softly lowlights the overlap. This indicates
11 that the reader need not read the content of the overlap because it either will be
12 repeated or was repeated. The content of the overlap will be repeated on the next
13 virtual page or it was repeated from the prior virtual page.

14 15 Cited References

16 The Office cites **Kelley** as its primary references in its anticipation-based
17 rejections and its obviousness rejections. The Office cites **Warnock** as its
18 secondary reference in its obviousness rejections.

19 20 Kelley

21 **Kelley** describes a technology for positioning the text of a hypertext
22 markup language (html) file on a display screen linked to a computer such that
23 there are no partial lines of text displayed and without the re-display of text that
24 was displayed on a previous screen. By correctly positioning the text on the
25

1 display screen, even when the user scrolls the text backwards and forwards, only
2 entire lines of text are displayed which makes reading the text on the screen much
3 more user friendly. By locating the html tags within the html source file, the
4 number of lines of text in the file are determined and subsequently assigned to a
5 screen row within the display screen such that only entire lines of text are
6 displayable.

7
8 Warnock

9 **Warnock** describes a reader technology for displaying an electronic
10 document stored in a predetermined format (e.g., "Portable Document Format" or
11 PDF) and allowing articles of the document to be read in the direction of their
12 content information flow.

13 The reader includes a selector to select an article of the document to be
14 read. A displayer displays a first portion of the article in a manner which promotes
15 comfortable viewing, and a navigator permits the display of the next and
16 remaining sequential portions of the article in content flow (or reverse content
17 flow) order. Preferably, the displayer pans and zooms, as necessary, to position the
18 article portion in an article viewing window.

19 A method for viewing electronic documents on a digital computer includes
20 the steps of storing in the memory of the digital computer an electronic document,
21 selecting an article to be displayed on an output device of the digital computer in
22 an article view, displaying at least a portion of the article in the article viewing
23 mode on the output device, and using an input device of the digital computer to
24 cause a display of additional portions of the article to be displayed on the output
25

1 device in the article viewing mode. These additional portions of the article are
2 determined, at least in part, by predefined article sections and section links of the
3 document so that the thread of the article can be followed in forward and reverse
4 directions.

5 6 7 **Anticipation Rejections**

8 9 **Based upon Kelley**

10 The Office rejects claims 9, 11-19, 21-26, 28-32, 42-43, 45-48, and 50-51
11 under USC § 102(e) as being anticipated by **Kelley**. Applicant respectfully
12 traverses the rejections of these claims. Based on the reasons given below,
13 Applicant asks the Office to withdraw its rejection of these claims.

14 15 **Claims 9, 19, 42, 47, and 51**

16 Herein, Applicant amends independent claims 9, 19, 42, 47, and 51 to
17 include language that defines the “digital document” as a fixed digital document.

18 From p. 3, lines 22 through p. 4 line 12, the Application describes a “fixed
19 digital document.”¹ **Kelley** discloses a “hypertext markup language (html) file”
20 which, Applicant submits, is not a fixed digital document.

21
22 ¹ By their nature, the content of character-based digital documents is largely textual. Likewise, the content of
23 image-based digital documents is largely graphical. However, there is a significant and growing segment of the body of
24 image-based digital documents wherein the content is largely textual. These documents are image-based digital
25 documents caught in an intermediate stage of conversion from/to paper documents to/from character-based digital
documents.

Herein, these documents are called “fixed” digital documents (or simply fixed documents). The “fixed”
terminology refers to the immutable nature of the visible characters at a character-addressable level. In other words,
the content of a fixed document—in particular, the characters and words—cannot be simply modified using a
character-based application (such as a word processor). To modify a fixed document, it is typically converted to

1 Since **Kelley** does not disclose a “fixed digital document”, it does not
2 disclose all of the claimed elements and features of the claim. Accordingly,
3 Applicant asks the Office to withdraw its rejection of claims 9, 19, 42, 47, and 51.

4
5 Claims 11-18, 21-25, 43-46, 48-50

6 These claims ultimately depend upon independent claims 9, 19, 42, or 47.
7 As discussed above, claims 9, 19, 42, and 47 are allowable.

8 In addition to its own merits, each of these dependent claims is allowable
9 for the same reasons that its base claim is allowable. Applicant submits that the
10 Office withdraw the rejection of each of these dependent claims because its base
11 claim is allowable.

12
13 Claim 26

14 With the cited portions of **Kelley** provided in brackets, this amended claim
15 recites (in part):

- 16
17 • paginating one or more pages of a digital document into
18 multiple virtual pages; [Fig. 5, element 102, and col. 7, lines
19 13-23]
20 • placing a virtual-page boundary so that such boundary is not
21 coextensive with a line of text. [col. 6, lines 63-67 and col. 7,
22 lines 1-4];
23

24
25 character-based data (using technology like OCR). In addition, a fixed document may be immutable for non-technical reasons (e.g., legal reasons). [Application: p. 3, lines 22 through p. 4 line 12]

- lowlighting repeated content on a virtual page, the repeated content is content repeated from another virtual page.

In its obviousness rejection of claim 27, the Office indicates that **Warnock** discloses “lowlighting” at col. 9, lines 19-24 and that **Klinefelter** discloses “... repeated content on a virtual page, the repeated content is content repeated from another virtual page.”

As shown above, **Kelley** does not disclose all of the claimed elements and features of the claim. Accordingly, Applicant asks the Office to withdraw its rejection of this claim.

Claims 28-32

These claims ultimately depend upon independent claim 26. As discussed above, claim 26 is allowable.

In addition to its own merits, each of these dependent claims is allowable for the same reasons that its base claim is allowable. Applicant submits that the Office withdraw the rejection of each of these dependent claims because its base claim is allowable.

Obviousness Rejections

Lack of *Prima Facie* Case of Obviousness (MPEP § 2142)

Applicant disagrees with the Office’s obviousness rejections. Arguments presented herein point to various aspects of the record to demonstrate that all of the criteria set forth for making a *prima facie* case have not been met.

Based upon Kelley and Warnock

The Office rejects claims 1-4, 6-8, 10, 20, and 44 under USC § 103(a) as being unpatentable over **Kelley** in view of **Warnock**. Applicant respectfully traverses the rejections of these claims. Applicant asks the Office to withdraw its rejection of these claims.

No Motivation to Combine References

Applicant asserts that there is no motivation to combine the teachings of **Kelley** and the teachings of **Warnock**.

As discussed above, **Kelley** describes a technology for positioning the text of a hypertext markup language (html) file on a display screen linked to a computer such that there are no partial lines of text displayed and without the re-display of text that was displayed on a previous screen. Applicant submits that an "html" file is not a "fixed digital document," as described from p. 3, lines 22 through p. 4 line 12 of the Application.

As discussed above, **Warnock** describes a reader technology for displaying an electronic document stored in a predetermined format (e.g., "Portable Document Format" or PDF). Applicant submits that the "predetermined format" document of **Warnock** is a "fixed digital document," as described from p. 3, lines 22 through p. 4 line 12 of the Application.

While both references are in the field of displaying digital documents, there is no suggestion, teaching, or reason given by one reference that would motivate

1 one of ordinary skill in the art at the time of the invention (hereinafter, "OOSA")
2 to combine it with the teachings of the other reference.

3 **Kelley** says nothing that would motivate OOSA to look towards **Warnock**
4 and combine their teachings. Indeed, the teachings of **Kelley** regarding how to
5 compute the number of lines to be displayed (element 102 of Fig. 5 and col. 7,
6 lines 5-12) are wholly ineffective when it comes to a "fixed digital document."

7 In particular, Kelley states, "screen rows are then computed 102 according
8 to the font type and size of the text (col. 7, lines 8-10)." However, there is
9 typically no information accompanying the fixed digital document that identifies
10 the font type, size of the text, or even, for that matter, the actually location of lines
11 of text. Indeed, in many if not all fixed digital documents, the human-readable
12 text is typically nothing more than an image; so, information identifying font type,
13 size, and location is irrelevant.

14 Likewise, **Warnock** says nothing that would motivate OOSA to look
15 towards **Kelley** and combine their teachings.

16 The Office indicates that OOSA would be motivated to combine the
17 references because doing so furthers the goal of presenting "the document so as to
18 appear to the reader in the same manner as was intended by the publisher (Action,
19 p. 7 and citing **Warnock**, col. 1, lines 63-66)."

20 Applicant submits that this is a general motivation that lacks sufficient
21 specificity that would actually to look toward the specific teachings of **Kelley**. It
22 is not objective and particular evidence that our motivate OOSA to seek out the
23 teachings of **Kelley**, which is focused on viewing non-fixed digital documents
24 with defined font types and text sizes.

1 Accordingly, Applicant submits that OOSA would not be motivated to
2 combine the non-fixed digital document viewing techniques of **Kelley** with the
3 fixed digital documents of **Warnock**.

4 For the foregoing reason, Applicant asks the Office to withdraw its
5 rejections of claims 1-4, 6-8, 10, 20, and 44.

6
7 **Based upon Kelley, Warnock and other references**

8 The Office rejects claims 5, 27, 33-41, 49, and 52 under USC § 103(a) as
9 being unpatentable over **Kelley** in view of **Warnock** and another reference (e.g.,
10 **Baum, Klinefelter, Atkinson, and Bereiter**). Applicant respectfully traverses the
11 rejections of these claims. Applicant asks the Office to withdraw its rejection of
12 these claims.

13 As discussed above, Applicant submits that OOSA would not be motivated
14 to combine the non-fixed digital document viewing techniques of **Kelley** with the
15 fixed digital documents of **Warnock**. If so, then it follows that OOSA would not
16 be motivated to combine the teachings of **Kelley, Warnock**, and any other
17 references.

18 For that reason, Applicant asks the Office to withdraw its rejections of
19 claims 5, 27, 33-41, 49, and 52.

20
21 **Based upon Kelley, Warnock and Klinefelter**

22 More particularly, the Office rejects claims 27, 49, and 52 under USC §
23 103(a) as being unpatentable over **Kelley** in view of **Warnock** and in view of
24 **Klinefelter**. Applicant respectfully traverses the rejections of these claims.
25 Applicant asks the Office to withdraw its rejection of these claims.

No Motivation to Combine References

Applicant asserts that there is no motivation to combine the teachings of **Kelley** and the teachings of **Warnock** and the teachings of **Klinefelter**.

The Office asserts that **Klinefelter** discloses "displaying repeated text" at col. 21, lines 31-43. Applicant disagrees with the Office's assertion, but even if it were true, Applicant asserts that there is no motivation to combine the alleged teachings of **Klinefelter** with the teachings of **Kelley** and **Warnock**.

As the Office has noted about **Kelley**, its focus is on avoiding dividing the screen presentation of an "html" file in such a manner that splits a line of text (col. 6, lines 63-67 and col. 7, lines 1-4). Applicant submits that OOSA seeking to further the goal of avoiding the display of partial text at the top/bottom of a screen would not be motivated to seek the alleged teachings of **Klinefelter** ("displaying repeated text," Action, p. 10).

As the Office has noted about **Warnock**, its focus is to display its fixed document so that it appears in the manner that the publisher intended (col. 1, lines 63-66). Applicant submits that OOSA seeking to further the goal of displaying a fixed document in a manner that the publisher intended would not be motivated to seek the alleged teachings of **Klinefelter** ("displaying repeated text," Action, p. 10).

Applicant submits there is no suggestion, teaching, or reason given by one reference that would motivate OOSA to combine it with the teachings of the other reference.

1 Accordingly, Applicant submits that OOSA would not be motivated to
2 combine the alleged teachings of **Klinefelter** with teachings of **Kelley** and
3 **Warnock**.

4 *Alleged Teaching of Klinefelter*

5 Furthermore, Applicant respectfully submits that **Klinefelter** does not teach
6 that which the Office alleges that it does. The Office asserts that **Klinefelter**
7 discloses "displaying repeated text" at col. 21, lines 31-43. Applicant disagrees
8 with the Office's assertion.

9 The text cited by the Office is reproduced below. Note that the emphasized
10 text (such emphasis has been added) discloses that it is the numbers of the text
11 lines that are repeated and not the "text" itself that is repeated.

12
13 Scrolling is done by moving the text line block numbers in the
14 pertinent Line Number Table to a corresponding lower or higher position
15 in the Table sequentially, and moving the corresponding *repeated text line*
16 *numbers* in relative memory 18 to positions associated with horizontal
17 pixel line numbers which correspond to horizontal pixel lines which are
18 higher or lower on the screen. If the scrolling is to be in "jumps" insofar as
19 moving upward and downward an entire text line in the time between
20 one screen vertical scan and the next, the text line block numbers in the
21 Line Number Table move one position upward or downward for each
22 desired jump. If the textual characters have been selected to be ten pixel
23 lines high, the ten *repetitions of each of the text line block numbers* in relative
24 memory 18 move correspondingly ten horizontal pixel line number
25 positions up or down in that memory in that same time between one
vertical scan of the screen of display monitor 10 and the next.

1 Applicant submits that the Office should withdraw its rejection because
2 **Klinefelter** does not disclose the element or feature that it alleges. Accordingly,
3 the Applicant asks the Office to withdraw its rejection of these claims.
4

5 **Dependent Claims**
6

7 In addition to its own merits, each dependent claim is allowable for the
8 same reasons that its base claim is allowable. Applicant submits that the Office
9 withdraw the rejection of each dependent claim where its base claim is allowable.
10

11 **Conclusion**
12

13 All pending claims are in condition for allowance. Applicant respectfully
14 requests reconsideration and prompt issuance of the application. If any issues
15 remain that prevent issuance of this application, the Office is urged to contact the
16 undersigned attorney before issuing a subsequent Action.

17 Respectfully Submitted,

18 Dated: 12-8-04
19

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